

SEQUENCE LISTING



<110> Nolan, Garry P

<120> METHODS FOR SCREENING FOR TRANSDOMINANT INTRA-CELLULAR
EFFECTOR PEPTIDES AND RNA MOLECULES

<130> A-64260-2/DJB/RMS/DR

<140> 08/963,368

<141> 1997-03-11

<150> 08/589,108

<151> 1996-01-23

<150> 08/589,911

<151> 1996-01-23

<150> 08/789,333

<151> 1997-01-23

<160> 102

<170> PatentIn Ver. 2.0

<210> 1

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: random
sequence.

<220>

<221> misc_feature

<222> (7)..(35)

<223> The n(s) at positions

7,8,10,11,13,14,16,17,19,20,22,23,25,26,28,29,31,3
2,34,35 can be any nucleic acid.

<400> 1

atgggannkn nknknknkn knknknknkn nnknknkggg ggcccccc

48

<210> 2

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: random sequence.

<220>

<221> VARIANT

<222> (3)..(12)

<223> The Xaa(s) at positions 3-12 can be any amino acid.

<400> 2

Met Gly Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Gly Gly Pro Pro
1 5 10 15

<210> 3

<211> 4

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: molecular flexibility/stability sequence.

<400> 3

Gly Gly Pro Pro
1

<210> 4

<211> 61

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: coiled-coil structure.

<400> 4

Met Gly Cys Ala Ala Leu Glu Ser Glu Val Ser Ala Leu Glu Ser Glu
1 5 10 15

Val Ala Ser Leu Glu Ser Glu Val Ala Ala Leu Gly Arg Gly Asp Met
20 25 30

Pro Leu Ala Ala Val Lys Ser Lys Leu Ser Ala Val Lys Ser Lys Leu
35 40 45

Ala Ser Val Lys Ser Lys Leu Ala Ala Cys Gly Pro Pro
50 55 60

<210> 5
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: loop
structure.

<400> 5
Gly Arg Gly Asp Met Pro
1 5

<210> 6
<211> 69
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: minibody
presentation structure.

<400> 6
Met Gly Arg Asn Ser Gln Ala Thr Ser Gly Phe Thr Phe Ser His Phe
1 5 10 15

Tyr Met Glu Trp Val Arg Gly Gly Glu Tyr Ile Ala Ala Ser Arg His
20 25 30

Lys His Asn Lys Tyr Thr Thr Glu Tyr Ser Ala Ser Val Lys Gly Arg
35 40 45

Tyr Ile Val Ser Arg Asp Thr Ser Gln Ser Ile Leu Tyr Leu Gln Lys
50 55 60

Lys Lys Gly Pro Pro
65

<210> 7
<211> 7
<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: nuclear
localization sequence.

<400> 7

Pro Lys Lys Lys Arg Lys Val
1 5

<210> 8

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: nuclear
localization sequence.

<400> 8

Ala Arg Arg Arg Arg Pro
1 5

<210> 9

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: nuclear
localization sequence.

<400> 9

Glu Glu Val Gln Arg Lys Arg Gln Lys Leu
1 5 10

<210> 10

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: nuclear
localization sequence.

<400> 10

Glu Glu Lys Arg Lys Arg Thr Tyr Glu

1

5

<210> 11

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: nuclear
localization sequence.

<400> 11

Ala Val Lys Arg Pro Ala Ala Thr Lys Lys Ala Gly Gln Ala Lys Lys

1

5

10

15

Lys Lys Leu Asp

20

<210> 12

<211> 31

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: signal
sequence.

<400> 12

Met Ala Ser Pro Leu Thr Arg Phe Leu Ser Leu Asn Leu Leu Leu Leu

1

5

10

15

Gly Glu Ser Ile Leu Gly Ser Gly Glu Ala Lys Pro Gln Ala Pro

20

25

30

<210> 13

<211> 21

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: signal
sequence.

<400> 13

Met Ser Ser Phe Gly Tyr Arg Thr Leu Thr Val Ala Leu Phe Thr Leu
1 5 10 15

Ile Cys Cys Pro Gly
20

<210> 14

<211> 51

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: transmembrane
domain sequence.

<400> 14

Pro Gln Arg Pro Glu Asp Cys Arg Pro Arg Gly Ser Val Lys Gly Thr
1 5 10 15

Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly
20 25 30

Ile Cys Val Ala Leu Leu Leu Ser Leu Ile Ile Thr Leu Ile Cys Tyr
35 40 45

His Ser Arg
50

<210> 15

<211> 33

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: transmembrane
sequence.

<400> 15

Met Val Ile Ile Val Thr Val Val Ser Val Leu Leu Ser Leu Phe Val
1 5 10 15

Thr Ser Val Leu Leu Cys Phe Ile Phe Gly Gln His Leu Arg Gln Gln
20 25 30

Arg

<210> 16
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: membrane
anchor sequence.

<400> 16
Pro Asn Lys Gly Ser Gly Thr Thr Ser Gly Thr Thr Arg Leu Leu Ser
1 5 10 15
Gly His Thr Cys Phe Thr Leu Thr Gly Leu Leu Gly Thr Leu Val Thr
20 25 30
Met Gly Leu Leu Thr
35

<210> 17
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:myristylation
sequence.

<400> 17
Met Gly Ser Ser Lys Ser Lys Pro Lys Asp Pro Ser Gln Arg
1 5 10

<210> 18
<211> 26
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: palmitoylation
sequence.

<400> 18
Leu Leu Gln Arg Leu Phe Ser Arg Gln Asp Cys Cys Gly Asn Cys Ser

1	5	10	15
---	---	----	----

Asp Ser Glu Glu Glu Leu Pro Thr Arg Leu

20	25
----	----

<210> 19
 <211> 20
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: palmitoylation
 sequence.

<400> 19
 Lys Gln Phe Arg Asn Cys Met Leu Thr Ser Leu Cys Cys Gly Lys Asn

1	5	10	15
---	---	----	----

Pro Leu Gly Asp

20

<210> 20
 <211> 19
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: palmitoylation
 sequence.

<400> 20
 Leu Asn Pro Pro Asp Glu Ser Gly Pro Gly Cys Met Ser Cys Lys Cys

1	5	10	15
---	---	----	----

Val Leu Ser

<210> 21
 <211> 5
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: lysosomal
 degradation sequence.

<400> 21

Lys Phe Glu Arg Gln

1

5

<210> 22

<211> 36

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: lysosomal
membrane sequence.

<400> 22

Met Leu Ile Pro Ile Ala Gly Phe Phe Ala Leu Ala Gly Leu Val Leu

1

5

10

15

Ile Val Leu Ile Ala Tyr Leu Ile Gly Arg Lys Arg Ser His Ala Gly

20

25

30

Tyr Gln Thr Ile

35

<210> 23

<211> 35

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: lysosomal
degradation sequence.

<400> 23

Leu Val Pro Ile Ala Val Gly Ala Ala Leu Ala Gly Val Leu Ile Leu

1

5

10

15

Val Leu Leu Ala Tyr Phe Ile Gly Leu Lys His His His Ala Gly Tyr

20

25

30

Glu Gln Phe

35

<210> 24

<211> 27

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: mitochondrial
matrix sequence.

<400> 24

Met Leu Arg Thr Ser Ser Leu Phe Thr Arg Arg Val Gln Pro Ser Leu
1 5 10 15

Phe Ser Arg Asn Ile Leu Arg Leu Gln Ser Thr
20 25

<210> 25

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: mitochondrial
inner membrane sequence.

<400> 25

Met Leu Ser Leu Arg Gln Ser Ile Arg Phe Phe Lys Pro Ala Thr Arg
1 5 10 15

Thr Leu Cys Ser Ser Arg Tyr Leu Leu
20 25

<210> 26

<211> 64

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: mitochondrial
intermembrane sequence.

<400> 26

Met Phe Ser Met Leu Ser Lys Arg Trp Ala Gln Arg Thr Leu Ser Lys
1 5 10 15

Ser Phe Tyr Ser Thr Ala Thr Gly Ala Ala Ser Lys Ser Gly Lys Leu
20 25 30

Thr Gln Lys Leu Val Thr Ala Gly Val Ala Ala Ala Gly Ile Thr Ala
35 40 45

Ser Thr Leu Leu Tyr Ala Asp Ser Leu Thr Ala Glu Ala Met Thr Ala
50 55 60

<210> 27

<211> 41

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: mitochondrial
outer membrane sequence.

<400> 27

Met Lys Ser Phe Ile Thr Arg Asn Lys Thr Ala Ile Leu Ala Thr Val
1 5 10 15

Ala Ala Thr Gly Thr Ala Ile Gly Ala Tyr Tyr Tyr Tyr Asn Gln Leu
20 25 30

Gln Gln Gln Gln Gln Arg Gly Lys Lys
35 40

<210> 28

<211> 4

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: endoplasmic
reticulum sequence.

<400> 28

Lys Asp Glu Leu
1

<210> 29

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: endoplasmic
reticulum sequence.

<400> 29

Leu Tyr Leu Ser Arg Arg Ser Phe Ile Asp Glu Lys Lys Met Pro
1 5 10 15

<210> 30

<211> 19

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:farnesylation
sequence.

<400> 30

Leu Asn Pro Pro Asp Glu Ser Gly Pro Gly Cys Met Ser Cys Lys Cys
1 5 10 15

Val Leu Ser

<210> 31

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
geranylgeranylation sequence.

<400> 31

Leu Thr Glu Pro Thr Gln Pro Thr Arg Asn Gln Cys Cys Ser Asn
1 5 10 15

<210> 32

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:destruction

sequence.

<400> 32

Arg Thr Ala Leu Gly Asp Ile Gly Asn
1 5

<210> 33

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: secretory
sequence.

<400> 33

Met Tyr Arg Met Gln Leu Leu Ser Cys Ile Ala Leu Ser Leu Ala Leu
1 5 10 15

Val Thr Asn Ser

20

<210> 34

<211> 29

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: secretory
sequence.

<400> 34

Met Ala Thr Gly Ser Arg Thr Ser Leu Leu Ala Phe Gly Leu Leu
1 5 10 15

Cys Leu Pro Trp Leu Gln Glu Gly Ser Ala Phe Pro Thr
20 25

<210> 35

<211> 27

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: secretory

sequence.

<400> 35

Met Ala Leu Trp Met Arg Leu Leu Pro Leu Leu Ala Leu Leu Ala Leu
1 5 10 15

Trp Gly Pro Asp Pro Ala Ala Ala Phe Val Asn
20 25

<210> 36

<211> 18

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: secretory
sequence.

<400> 36

Met Lys Ala Lys Leu Leu Val Leu Leu Tyr Ala Phe Val Ala Gly Asp
1 5 10 15

Gln Ile

<210> 37

<211> 24

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: secretory
sequence.

<400> 37

Met Gly Leu Thr Ser Gln Leu Leu Pro Pro Leu Phe Phe Leu Leu Ala
1 5 10 15

Cys Ala Gly Asn Phe Val His Gly
20

<210> 38

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: stability
sequence.

<220>

<221> VARIANT

<222> (3)..(6)

<223> The Xaa(s) at positions 3-6 can be any amino acid.

<400> 38

Met Gly Xaa Xaa Xaa Xaa Gly Gly Pro Pro

1 5 10

<210> 39

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: linker
sequence.

<400> 39

Gly Ser Gly Gly Ser

1 5

<210> 40

<211> 4

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: linker
sequence.

<400> 40

Gly Gly Gly Ser

1

<210> 41

<211> 124

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic

<220>

<221> VARIANT

<222> (115)..(120)

<223> The Xaa(s) at postions 115-120 can be any amino acid.

<400> 41

Met Arg Pro Leu Ala Gly Gly Glu His Thr Met Ala Ser Pro Leu Thr
1 5 10 15

Arg Phe Leu Ser Leu Asn Leu Leu Leu Leu Gly Glu Ser Ile Ile Leu
20 25 30

Gly Ser Gly Pro Gln Arg Pro Glu Asp Cys Arg Pro Arg Gly Ser Val
35 40 45

Lys Gly Thr Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro
50 55 60

Leu Ala Gly Ile Cys Val Ala Leu Leu Leu Ser Leu Ile Ile Thr Leu
65 70 75 80

Ile Cys Tyr His Ser Arg Gly Ser Gly Gly Ser Gly Ser Gly Gly Ser
85 90 95

Gly Ser Gly Gly Ser Gly Ser Gly Gly Ser Gly Ser Gly Gly Ser Gly
100 105 110

Gly Gly Xaa Xaa Xaa Xaa Xaa Xaa Gly Gly Pro Pro
115 120

<210> 42

<211> 173

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic.

<220>

<221> VARIANT

<222> (140)..(145)

<223> The Xaa(s) at positions 140-145 can be any amino acid.

<400> 42

Met Arg Pro Leu Ala Gly Gly Glu His Thr Met Ala Ser Pro Leu Thr
1 5 10 15

Arg Phe Leu Ser Leu Asn Leu Leu Leu Gly Glu Ser Ile Ile Leu
20 25 30

Gly Ser Gly Pro Gln Arg Pro Glu Asp Cys Arg Pro Arg Gly Ser Val
35 40 45

Lys Gly Thr Gly Leu Asp Phe Ala Cys Asp Ile Tyr Ile Trp Ala Pro
50 55 60

Leu Ala Gly Ile Cys Val Ala Leu Leu Leu Ser Leu Ile Ile Thr Leu
65 70 75 80

Ile Cys Tyr His Ser Arg Gly Ser Gly Gly Ser Gly Ser Gly Gly Ser
85 90 95

Gly Ser Gly Gly Ser Gly Ser Gly Gly Ser Gly Ser Gly Gly Ser Gly
100 105 110

Gly Gly Cys Ala Ala Leu Glu Ser Glu Val Ser Ala Leu Glu Ser Glu
115 120 125

Val Ala Ser Leu Glu Ser Glu Val Ala Ala Leu Xaa Xaa Xaa Xaa Xaa
130 135 140

Xaa Leu Ala Ala Val Lys Ser Lys Leu Ser Ala Val Lys Ser Lys Leu
145 150 155 160

Ala Ser Val Lys Ser Lys Leu Ala Ala Cys Gly Pro Pro
165 170

<210> 43

<211> 127

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic.

<220>

<221> VARIANT

<222> (38)..(43)

<223> The Xaa(s) at positions 38-43 can be any amino

acid.

<400> 43

Met Arg Pro Leu Ala Gly Gly Glu His Thr Met Ala Ser Pro Leu Thr
1 5 10 15

Arg Phe Leu Ser Leu Asn Leu Leu Leu Leu Gly Glu Ser Ile Ile Leu
20 25 30

Gly Ser Gly Gly Gly Xaa Xaa Xaa Xaa Xaa Xaa Gly Gly Ser Gly Gly
35 40 45

Ser Gly Ser Gly Gly Ser Gly Ser Gly Gly Ser Gly Ser Gly Gly Ser
50 55 60

Gly Ser Gly Gly Ser Gly Gly Gly Pro Gln Arg Pro Glu Asp Cys Arg
65 70 75 80

Pro Arg Gly Ser Val Lys Gly Thr Gly Leu Asp Phe Ala Cys Asp Ile
85 90 95

Tyr Ile Trp Ala Pro Leu Ala Gly Ile Cys Val Ala Leu Leu Leu Ser
100 105 110

Leu Ile Ile Thr Leu Ile Cys Tyr His Ser Arg Gly Gly Pro Pro
115 120 125

<210> 44

<211> 177

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic

<220>

<221> VARIANT

<222> (63)..(68)

<223> The Xaa(s) at positions 63-68 can be any amino
acid.

<400> 44

Met Arg Pro Leu Ala Gly Gly Glu His Thr Met Ala Ser Pro Leu Thr
1 5 10 15

Arg Phe Leu Ser Leu Asn Leu Leu Leu Leu Gly Glu Ser Ile Ile Leu
20 25 30

Gly Ser Gly Gly Gly Cys Ala Ala Leu Glu Ser Glu Val Ser Ala Leu
35 40 45

Glu Ser Glu Val Ala Ser Leu Glu Ser Glu Val Ala Ala Leu Xaa Xaa
50 55 60

Xaa Xaa Xaa Xaa Leu Ala Ala Val Lys Ser Lys Leu Ser Ala Val Lys
65 70 75 80

Ser Lys Leu Ala Ser Val Lys Ser Lys Leu Ala Ala Cys Gly Gly Ser
85 90 95

Gly Gly Ser Gly Ser Gly Gly Ser Gly Ser Gly Gly Ser Gly Ser Gly
100 105 110

Gly Ser Gly Ser Gly Gly Ser Gly Gly Gly Pro Gln Arg Pro Glu Asp
115 120 125

Cys Arg Pro Arg Gly Ser Val Lys Gly Thr Gly Leu Asp Phe Ala Cys
130 135 140

Asp Ile Tyr Ile Trp Ala Pro Leu Ala Gly Ile Cys Val Ala Leu Leu
145 150 155 160

Leu Ser Leu Ile Ile Thr Leu Ile Cys Tyr His Ser Arg Gly Gly Pro
165 170 175

Pro

<210> 45

<211> 47

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic

<220>

<221> VARIANT

<222> (38)..(43)

<223> The Xaa(s) at positions 38-43 can be any amino
acid.

<400> 45

Met Arg Pro Leu Ala Gly Gly Glu His Arg Met Ala Ser Pro Leu Thr

1 5 10 15

Arg Phe Leu Ser Leu Asn Leu Leu Leu Leu Gly Glu Ser Ile Ile Leu

20 25 30

Gly Ser Gly Gly Gly Xaa Xaa Xaa Xaa Xaa Xaa Gly Gly Pro Pro

35 40 45

<223> Description of Artificial Sequence: synthetic

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<220>
<221> VARIANT
<222> (62)..(67)
<223> The Xaa(s) at positions 62-67 can be any amino
      acid.
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<400> 46
Met Arg Pro Leu Ala Gly Gly Glu His Thr Met Ala Ser Pro Leu Thr
      1             5             10             15
```

Arg Phe Leu Ser Leu Asn Leu Leu Leu Leu Gly Glu Ser Ile Ile Leu
20 25 30

Gly Ser Gly Gly Gly Ala Ala Leu Glu Ser Glu Val Ser Ala Leu Glu
35 40 45

Ser Glu Val Ala Ser Leu Glu Ser Glu Val Ala Ala Leu Xaa Xaa Xaa
50 55 60

Xaa Xaa Xaa Leu Ala Ala Val Lys Ser Lys Leu Ser Ala Val Lys Ser
65 70 75 80

Lys Leu Ala Ser Val Lys Ser Lys Leu Ala Ala Cys Gly Pro Pro
85 90 95

```
<210> 47
<211> 9
<212> PRT
<213> Artificial Sequence
```

<220>

<223> Description of Artificial Sequence: synthetic

<220>

<221> VARIANT

<222> (1)..(9)

<223> The Xaa(s) at positions 1-3, 6, 8, 9 can be any amino acid.

<400> 47

Xaa Xaa Xaa Pro Pro Xaa Pro Xaa Xaa

1

5

<210> 48

<211> 63

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic

<220>

<221> misc_feature

<222> (7)..(20)

<223> The n(s) at positions 7,8,10,11,13,14,16,17,19,20 can be any nucleic acid.

<400> 48

atgggcnnkn nknnknnknn kagacctctg cctccasbkg ggsbksbkgg aggcccacct 60
taa 63

<210> 49

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic

<220>

<221> VARIANT

<222> (3)..(16)

<223> The Xaa(s) at postions 3-7, 13,15,16 can be any amino acid.

<400> 49

Met Gly Xaa Xaa Xaa Xaa Xaa Arg Pro Leu Pro Pro Xaa Pro Xaa Xaa

1

5

10

15

Gly Gly Pro Pro
20

<210> 50

<211> 12

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: random
sequence.

<220>

<221> VARIANT

<222> (2) .. (11)

<223> The Xaa(s) at postions 2-11 can be any amino acid.

<400> 50

Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys
1 5 10

<210> 51

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: epitope tag
sequence.

<400> 51

Met Gly Gly Gly Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Gly Ser Leu
1 5 10 15

Glx

<210> 52

<211> 12

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PKCa
translocation inhibitor sequence.

<400> 52

Gly Lys Gln Lys Thr Lys Thr Ile Lys Gly Pro Pro
1 5 10

<210> 53

<211> 92

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: random
sequence.

<220>

<221> misc_feature

<222> (28)..(56)

<223> The n(s) at postions

28,29,31,32,34,35,37,38,40,41,43,44,46,47,49,50,52
,53,55,56 can be any nucleic acid.

<400> 53

gcttagcaag atctctacgg tggaccknnk nnknnknnkn nknnknnkn knnknncccc 60
actcccatgg tcctacgtac caccacactg gg 92

<210> 54

<211> 34

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic

<400> 54

gcttagcaag atctgtgtgt cagttagggt gtgg 34

<210> 55

<211> 47

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: random
sequence.

<220>
<221> misc_feature
<222> (23)..(24)
<223> The n(s) at positions 23-24 can be any nucleic acid.

<400> 55
ctggagaacc aggaccatgg gcnnkgggcc cccttaaacc attaaat

47

<210> 56
<211> 71
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: random sequence.

<220>
<221> misc_feature
<222> (23)..(48)
<223> The n(s) at positions
23,24,26,27,29,30,38,39,44,45,47,48 can be any
nucleic acid.

<400> 56
ctggagaacc aggaccatgg gcnnknnknn kcccccnnk cctnnknnkg ggccccctta 60
aaccattaaa t 71

<210> 57
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic

<400> 57
tcatgcatcc aatttaatgg tttaag

26

<210> 58
<211> 4950
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: retroviral vector with presentation construct sequence.

<400> 58

tgaagacccc cacctgtagg tttggcaagc tagcttaagt aacgccatth tgcaaggcat 60
ggaaaataca taactgagaa tagagaagtt cagatcaagg ttaggaacag agagacagca 120
gaatatgggc caaacaggat atctgtggta agcagttcct gccccggctc agggccaaga 180
acagatggtc cccagatgcy gtcccgcctt cagcagtttc tagagaacca tcagatgttt 240
ccagggtgcc ccaaggacct gaaaatgacc ctgtgcctta tttgaactaa ccaatcagtt 300
cgcttctcgc ttctgttcgc gcgcttctgc tccccgagct caataaaaaga gccacacacc 360
cctcactcgg cgcgccagtc ctccgataga ctgcgtcgcc cgggtacccg tatteccaat 420
aaagcctctt gctgtttgca tccgaatcgt ggactcgtg atccttgga gggctctctc 480
agattgattg actgccacc tcgggggtct ttcatttga ggttccaccg agatttggag 540
acccctgcct agggaccacc gacccccccg cggggaggta agctggccag cggctcgtttc 600
ctgtctgtct ctgtctttgt gcgtgtttgt gccggcatct aatgtttgcg cctgcgtctg 660
tactagttag ctaactagct ctgtatctgg cggaccctg gtggaactga cgagtctga 720
acaccggcc gcaaccctgg gagacgtccc agggactttg ggggcccgtt ttgtggcccg 780
acctgaggaa gggagtcgat gtggaatccg acccctcag gatattgtgt tctggttaga 840
gacgagaacc taaaacagtt ccgcctcgc tctgaattht tgctttcggg ttggaaccga 900
agccgcgcgt cttgtctgct gcagcgtgc agcatcgttc tgtgttctct ctgtctgact 960
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<210> 59

<211> 74

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic

<400> 59

ctggagaacc aggaccatgg gcaagagaaa gggcgatgag gtggatggag tggggccccc 60

ttaaaccatt aaat

74

<210> 60
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: anti-apoptosis
sequence.

<400> 60
Met Gly Lys Arg Lys Gly Asp Glu Val Asp Gly Val Gly Pro Pro
1 5 10 15

<210> 61
<211> 74
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: random
sequence.

<220>
<221> misc_feature
<222> (35)..(48)
<223> The n(s) at positions 35,36,38,39,41,42,47,48 can
be any nucleic acid.

<400> 61
ctggagaacc aggaccatgg gcaagagaaa gggcnnknnk nnkgaknnkg tggggccccc 60
ttaaaccatt aaat 74

<210> 62
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: random
sequence.

<220>
<221> VARIANT
<222> (7)..(11)
<223> The Xaa(s) at postions 7-9,11 can be any amino

acid.

<220>

<221> VARIANT

<222> (10)

<223> The amino acid at position 10 can be Aspartic acid
or Glutamic acid.

<400> 62

Met	Gly	Lys	Arg	Lys	Gly	Xaa	Xaa	Xaa	Asp	Xaa	Val	Gly	Pro	Pro
1				5					10					15

<210> 63

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic

<400> 63

tcacgcatcc aatttaatgg tttaag

26

<210> 64

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic

<400> 64

gacccctccct ttatccag

18

<210> 65

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic

<400> 65

ctacaggtgg ggtctttc

18

<210> 66

<211> 48

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic

<400> 66
atgggcaaga gaaagggcac ggcgtctgat gctgtggggc ccccttaa

48

<210> 67
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic

<400> 67
Thr Ala Ser Asp Ala
1 5

<210> 68
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic

<400> 68
atgggcaaga gaaagggcta tccttctgat gtgggtggggc ccccttaa

48

<210> 69
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic

<400> 69
Tyr Pro Ser Asp Val
1 5

<210> 70
<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic

<400> 70

atgggcaaga gaaagggcac gccttcggat atggtggggc ccccttaa

48

<210> 71

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic

<400> 71

Thr Pro Ser Asp Met

1

5

<210> 72

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic

<400> 72

atgggcaaga gaaagggcac ggcttctgat cttgtggggc ccccttaa

48

<210> 73

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic

<400> 73

Thr Ala Ser Asp Leu

1

5

<210> 74

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic

<400> 74

atgggcaaga gaaagggctc tgatagggat attgtggggc ccccttaa

48

<210> 75

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic

<400> 75

Ser Asp Arg Asp Ile

1

5

<210> 76

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic

<400> 76

atgggcaaga gaaagggctg gttgctagag tttgtggggc ccccttaa

48

<210> 77

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic

<400> 77

Trp Leu Leu Glu Phe

1

5

<210> 78

<211> 48

<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic

<400> 78

atgggcaaga gaaagggctg gttgatagag tttgtggggc ccccttaa

48

<210> 79

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic

<400> 79

Trp Leu Ile Glu Phe

1

5

<210> 80

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<221> SITE

<222> (1)..(6)

<223> The Xaa(s) at positions 1-6 can be any amino acid.

<220>

<223> Description of Artificial Sequence: synthetic

<400> 80

Xaa Xaa Xaa Xaa Xaa Xaa

1

5

<210> 81

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic

<400> 81

Ser Tyr Gln Asp Leu

1

5

<210> 82

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic

<220>

<221> VARIANT

<222> (3)..(12)

<223> The Xaa(s) at positions 3-12 can be any amino acid.

<400> 82

Met Gly Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Gly Gly Pro Pro

1

5

10

15

<210> 83

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic

<400> 83

ctgacacaca ttccacag

18

<210> 84

<211> 122

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic

<400> 84

ggatccagtg tgggtggtacg taggaatacc atgggatgtc cgtctgttgc taggccgcgg 60

ggtggtgggg gcccccccta gctaactaaa gatcccagtg tgggtggtacg taggaattcg 120

cc

122

<210> 85
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic

<400> 85
Met Gly Cys Pro Ser Val Ala Arg Pro Arg Gly Gly Gly Gly Pro Pro
1 5 10 15

<210> 86
<211> 112
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic

<400> 86
ggatcccagt gtggtggtac gtaggaatac catgggattg tcttttgta ttygtctgca 60
gcatcgtaggg ggccccccct agctaactaa agatcccagt gtggtggtac gt 112

<210> 87
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic

<400> 87
Met Gly Leu Ser Phe Val Ile Arg Leu Gln His Arg Gly Gly Pro Pro
1 5 10 15

<210> 88
<211> 96
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic

<400> 88
ggatcccagt gtggtggtac gtaggagtag catgggacct ccgatttggt atactcattg 60

gagtcacggg ggccccccct agctaactaa agatcc

96

<210> 89

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic

<400> 89

Met Gly Pro Pro Ile Trp Tyr Thr His Trp Ser His Gly Gly Pro Pro

1

5

10

15

<210> 90

<211> 95

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic

<400> 90

ggatcccagt gtggtggtac gtaggagtag catggaagtc aggcgtttgt gaatactcgg 60

cataaggggg gcccccccta gctaactaaa gatcc

95

<210> 91

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic

<400> 91

Met Glu Val Arg Arg Leu

1

5

<210> 92

<211> 126

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic

<400> 92
 cgggccgtat tcaacaaggg gctgaaggat gccagaagg taccattg tatgggatct 60
 gatctggggc ctccgtgcac atgctttaca tgtgtttagt cgagggttaa aaacgtctag 120
 gcccc 126

<210> 93
 <211> 107
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: synthetic

<400> 93
 ggatcccagt gtggtggtac gtaggaatac catgggactt tagccgggcc cccctagct 60
 aactaaagat cccagtgtgg tggtagtag gaattcgcca gcacagt 107

<210> 94
 <211> 95
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: synthetic

<400> 94
 ggatcccagt gtggtggtac gtaggaatac atgggaactg ttatggcgat gtcggattag 60
 gtcgaggggg gcccccccta gctaactaaa gatcc 95

<210> 95
 <211> 9
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: synthetic

<400> 95
 Met Gly Thr Val Met Ala Met Ser Asp
 1 5

<210> 96
 <211> 95
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic

<400> 96

ggatccagtg tggtaggtacg taggaataacc atgggatgtc cgtctgttgc taggccgcgg 60
ggtggtgggg gcccccccta gctaactaaa gatcc 95

<210> 97

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic

<400> 97

Met Gly Cys Pro Ser Val Ala Arg Pro Arg Gly Gly Gly Gly Pro Pro
1 5 10 15

<210> 98

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<221> VARIANT

<222> (1)..(5)

<223> The Xaa(s) at postions 1-5 can be any amino acid.

<220>

<223> Description of Artificial Sequence: random
sequence.

<400> 98

Xaa Xaa Xaa Xaa Xaa
1 5

<210> 99

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: histidine tag
sequence.

<400> 99

His His His His His His

1

5

<210> 100

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<221> VARIANT

<222> (1)..(4)

<223> The Xaa(s) at postions 1-3 and 5 can be any amino acid.

<220>

<221> VARIANT

<222> (4)

<223> The amino acid at postion 4 can be Aspartic acid or Glutamic acid.

<220>

<223> Description of Artificial Sequence: synthetic.

<400> 100

Xaa Xaa Xaa Asp Xaa

1

5

<210> 101

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic

<400> 101

atgggcaaga gaaaaggctc ttaccaagat ctggtggggc ccccttaa

48

<210> 102

<211> 2

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: linker sequence.

<400> 102

Gly Ser

1